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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jarrod N. Raphael on January 15 2009.

Claim 16, line 3 insert "number average" prior to "molar mass"

Claim 17, line 2 insert "number average" prior to "molar mass"

Claim 27, line 5 insert "number average" prior to "molar mass"

Claim 28, line 4 insert "number average" prior to "molar mass"

Basis for amendment: Claims amended to recite insert "number average molar mass" which is consistent with accepted definition of term M_n

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Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: Claims 16-19, 27, and 28 are allowed over the closest references, cited below.

The present invention is drawn to a copolymer of ethylene with α -olefins which comprises (1) M_w/M_n of 1-8, (2) density of 0.85-0.94, (3) M_n of 10,000-4,000,000, (4) CDBI of less than 50 %, (5) a vinyl group content of 0.1-1 vinyl groups/1000 C atoms, (6) long chain branching (lcb) rate of 0.001-0.09 lcb/1000 C atoms, (7) at least a bimodal short chain branching distribution, (8) side chain branching of the maxima of individual peaks of the short chain branching distribution is greater than 5 CH_3 /1000 C atoms, as determined by crystallization analysis fractionation (CRYSTAF).

Another aspect of the invention is drawn to a fiber, film, or molding comprising said copolymer. A further aspect of the invention is drawn to a polymer mixture comprising from 1-99 wt % of at least one of said copolymer and from 1-99 wt % of a polymer which is different from said copolymer.

Kale *et al.* (U.S. 6,420,507) discloses a series of ethylene/octene copolymer exhibiting a density of about 0.870 g/cm^3 , M_n on order of about 44,000-57,000, and M_w/M_n in the range of about 2.2-2.8 (see entries 1a-c and 2a-d in tables 2 and 5). Polymers of example 1b and 2a exhibit bimodal short chain branching distribution. Kale *et al.* discloses generally that polymers of the invention will preferably have at least 0.03, and more preferably at least 0.04 vinyl groups/1000 C atoms, and polymers will preferably characterized as having preferably from 0.01 to 3.0 long chain branches/1000 C atoms. While Kale *et al.* indicates preference for polymers possessing vinyl groups and long chain branching, there is no disclosure that polymers of examples 1a-c and 2a-d necessarily and inherently possess these characteristics. Note that, out of the group of 1a-c and 2a-d that only polymer 1b and 2a exhibited a bimodal short chain branching distribution. Moreover, the reference does not teach or fairly suggest to one of ordinary skill in the art that inventive copolymers exhibit a CDBI of less than 50 % and a side chain branching of the maxima of peaks of the short chain branching distribution of greater than

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5 CH₃/1000 C atoms. Taken as a whole, Kale *et al.* does not teach or suggest to one of ordinary skill in the art the polymer of the instant claims that exhibits claimed properties (1) through (8).

Stehling *et al.* (U.S. 5,382,630) teaches a film comprising an ethylene copolymer comprising a 50/50 blend of HDPE and LLDPE which exhibits M_w/M_n of 2.4, a density of 0.9335 g/cm³, M_w of 76,500, and CDBI of 25 %. The reference does not teach or suggest to one of ordinary skill in the art the polymer of the instant claims that exhibits claimed properties (1) through (8).

Jejelowo *et al.* (U.S. 5,281,679) discloses polymer H, prepared by chromium based catalyst, exhibiting a density of 0.920 g/cm³, M_n of 14,000, M_w/M_n of 7.1, and CDBI of 25.9 %. The prior art does not teach or suggest to one of ordinary skill in the art the polymer of the instant claims that exhibits claimed properties (1) through (8).

Ferri *et al.* (U.S. 6,737,130) discloses substantially spherical polyolefin having density of 0.85 to 0.89 g/cm³, M_w/M_n less than 3, and short chain branching level of about 60-100 (per 1000 carbon atoms). For every 100 branches that are methyl, there are about 1-80 ethyl branches, 1-20 propyl branches, 1-50 butyl branches, 1-20 amyl branches, and 1-100 hexyl or longer branches. The prior art does not teach or suggest to one of ordinary skill in the art the polymer of the instant claims that exhibits claimed properties (1) through (8).

Spenadel *et al.* (U.S. 5,246,783) discloses a copolymer having a density of 0.86 to 0.96 g/cm³, M_w/M_n of 1.5-30, and CDBI greater than 45 %. The reference does not teach or suggest to one of ordinary skill in the art the polymer of the instant claims that exhibits claimed properties (1) through (8).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu S. Jagannathan, can be reached at (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

/Rip A. Lee/
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January 15, 2009

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796